

## Incidence and Mortality Rate Trends

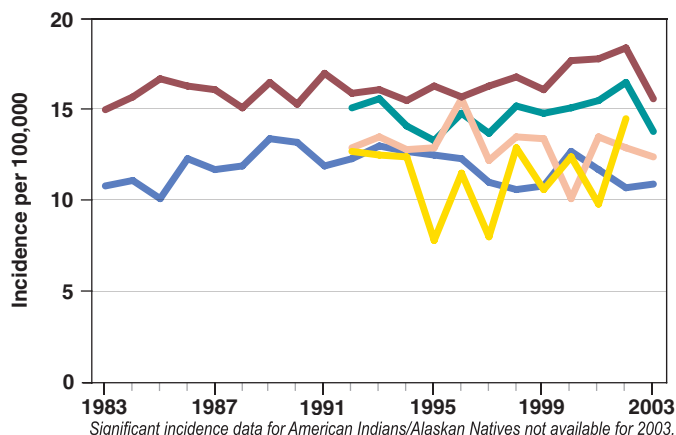
Between infancy and 15 years of age, cancer is the leading cause of death by disease among U.S. children. Approximately 9,500 new cases of pediatric cancer are expected to occur in this age group in 2006. Among the 11 major types of childhood cancers, leukemias (blood cell cancers) and brain and other central nervous system (CNS) tumors account for over half of new cases. White children are more likely to develop cancer than any other ethnic group.

Although the incidence of invasive cancer in children has increased slightly over the past 30 years, mortality in this group has declined dramatically for many childhood cancers.<sup>1</sup> The combined 5-year survival rates for all childhood cancers improved from 56 percent in the 1970s to 79 percent in the 1990s.

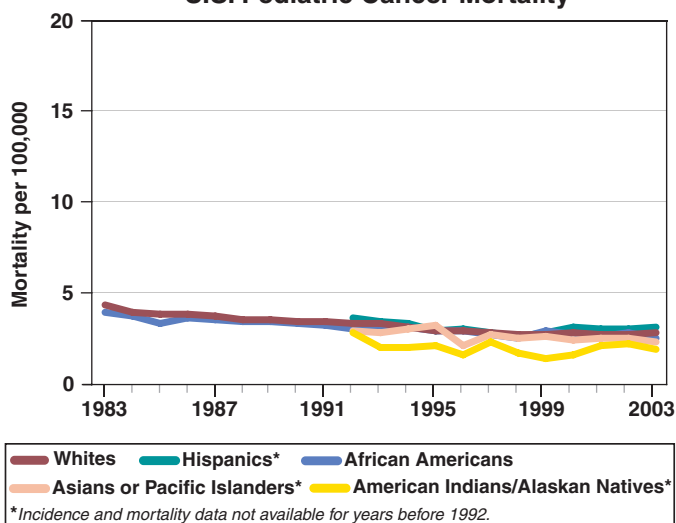
Source for incidence data: Surveillance, Epidemiology, and End Results (SEER) Program and the American Cancer Society. Additional statistics and charts are available at <http://seer.cancer.gov/>.

<sup>1</sup>Incidence and mortality data reflect cancers in children 0–18 years of age.

U.S. Pediatric Cancer Incidence



U.S. Pediatric Cancer Mortality



## Trends in NCI Funding for Pediatric Cancer<sup>2</sup> Research

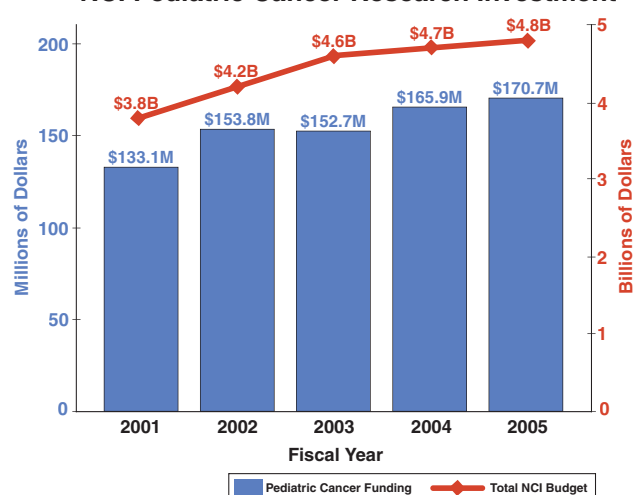
The National Cancer Institute's (NCI's) investment<sup>3</sup> in pediatric cancer research has increased from \$133.1 million in fiscal year 2001 to \$170.7 million in fiscal year 2005.

Source: NCI Financial Management Branch <http://fmb.cancer.gov>.

<sup>2</sup>Includes cancers in children 0–18 years of age. Does not include research on pediatric AIDS, infant mortality, science enrichment, or anti-smoking.

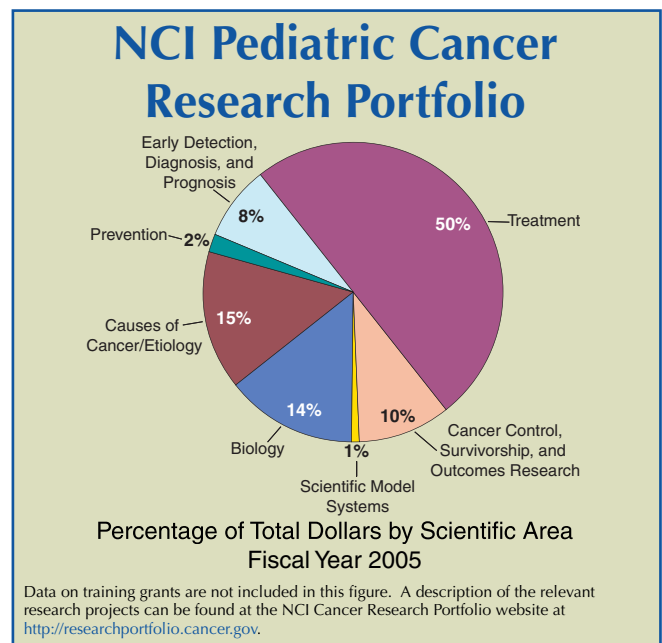
<sup>3</sup>The estimated NCI investment is based on funding associated with a broad range of peer-reviewed scientific activities. For additional information on research priorities and funding, see <http://www.nih.gov/about/researchpriorities.htm#overview>.

NCI Pediatric Cancer Research Investment



## Examples of NCI Research Initiatives Relevant to Pediatric Cancer

- The **Children's Oncology Group (COG)** is an NCI-supported clinical trials cooperative group devoted exclusively to childhood and adolescent cancer research. The COG develops and coordinates cancer clinical trials conducted at its more than 200 member institutions, which include cancer centers of all major universities and teaching hospitals throughout the United States and Canada, as well as sites in Europe and Australia. <http://www.childrensoncologygroup.org>
- The **COG Phase I/Pilot Consortium** develops and conducts pediatric Phase I and pilot studies. The agents and regimens evaluated for safety in children by the Consortium can then be studied within the larger group of COG institutions to determine their role in the treatment of specific childhood cancers.
- The **Pediatric Brain Tumor Consortium** is a multidisciplinary cooperative research organization devoted to the identification of superior treatment strategies for children with primary CNS tumors. <http://www.pbtc.org/>
- The **Childhood Cancers Trial Results** web page provides results from recent NCI-funded clinical trials. <http://www.cancer.gov/clinicaltrials/childhood-cancer-updates>
- NCI's **Strategic Partnering to Evaluate Cancer Signatures (SPECS)** program explores how information derived from molecular studies can be used to improve the care of cancer patients and ultimately improve outcomes. Two of the six SPECS projects focus on childhood cancers. <http://grants1.nih.gov/grants/guide/rfa-files/RFA-CA-04-015.html>



- The **New Approaches to Neuroblastoma Therapy Consortium (NANT)** is a group of universities and children's hospitals that are developing and testing promising new treatments for high-risk neuroblastoma patients. <http://www.nant.org/>
- The **Pediatric Preclinical Testing Program (PPTP)** develops preclinical data for prioritizing new agents and combinations of agents for clinical evaluation against specific childhood cancers. <http://ctep.cancer.gov/resources/child.html>
- The **Childhood Cancer Survivor Study (CCSS)** addresses the long-term effects of cancer and cancer therapy in over 14,000 survivors of childhood cancer and approximately 4,000 siblings of survivors who serve as control subjects. <http://www.cancer.umn.edu/ltfu>
- The **Childhood Cancers Home Page** directs visitors to up-to-date information on childhood cancer treatment, genetics, causes, and other topics. <http://www.cancer.gov/cancertopics/types/childhoodcancers>

## Selected Opportunities for Advancement of Pediatric Cancer Research

- Identify new therapeutic targets that can serve as the basis for more effective and less toxic treatments for children with cancer.
- Understand the biological basis for treatment success and failure so that treatments can be tailored to maximize response and reduce long-term side effects.